

CLAIMS

[1] A dielectric material comprising an organic insulating material, and a metal microparticle and/or an organic charge trapping material in the organic insulating material, wherein the metal microparticle has a work function at an energy level between the ionization potential and the electron affinity of the organic insulating material, or alternatively the metal microparticle or the organic charge trapping material has an ionization potential and an electron affinity at an energy level between the ionization potential and the electron affinity of the organic insulating material.

[2] The dielectric material according to claim 1, wherein the metal microparticle and/or the organic charge trapping material is dispersed in the organic insulating material, or alternatively a layer of the metal microparticle and/or the organic charge trapping material is sandwiched between layers of the organic insulating material.

[3] The dielectric material according to claim 1 or 2, wherein the organic insulating material is selected from the group consisting of 2-amino-4,5-imidazole dicyanate, quinomethane compounds, triphenylamine compounds, pyridone compounds, polystyrenes, polyvinyl carbazoles, α -NPD, TPD, Alq₃, and CBP.

[4] The dielectric material according to any one of claims

1 to 3, wherein the organic insulating material is selected from the group consisting of 2-amino-4,5-imidazole dicyanate, triphenylamine compounds, and α -NPD, and the organic charge trapping material is selected from the group consisting of pyridone compounds, phthalocyanine compounds, and α -6T.

[5] A capacitor comprising a layer of the dielectric material according to any one of claims 1 to 4 and two electrodes sandwiching the layer.

[6] A capacitor comprising the dielectric material according to any one of claims 1 to 4, layers of an organic insulating material sandwiching the dielectric material, and electrodes sandwiching the layers.

[7] A method for producing a capacitor, comprising the steps of forming an electrode thin film, applying a liquid mixture containing an organic insulating material, and a metal microparticle and/or an organic charge trapping material to the formed electrode thin film, followed by drying, and forming an electrode thin film on the dried coated film.

[8] A method for producing a capacitor, comprising the steps of forming an electrode thin film, codepositing an organic insulating material, and a metal microparticle and/or an organic charge trapping material on the formed electrode thin film, and forming an electrode thin film on the codeposited film.